

ABSTRACT

An optical medium having a high refractive index without anisotropy and a wide transmission wavelength is obtained.

- 5 The cubic crystal material is $\alpha\beta\text{O}_3$, where α is at least one of K, Ba, Sr, Ca, and β is at least one of Ta, Ti. Optimally, the cubic crystal material is $\text{KTa}_{1-x}\text{Nb}_x\text{O}_3$, where composition x is $0 \leq x \leq 0.35$. This composition enables to raise refractive index while its phase transition temperature is below a room
10 temperature.